Impact Crater Formation

A meteorite slams into the Earth, and the contact causes a shock wave to ripple through the ground.

The impact explosion sends rocks and other materials flying away from the impact site. This ejected material is called “ejecta.” Within the area of the shock wave, some materials melt and others turn into vapor, which is a mix of gas and liquid.

In larger craters, the force of the shock wave compresses rocks and Earth under the impact site. Those materials expand again after compression, moving Earth back up, and filling part of the hole made by initial impact.

Did you know?
The largest known impact crater on Earth is the Vredefort crater in South Africa.

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